Editors' Choice: Math Blaster Mystery, p. 124

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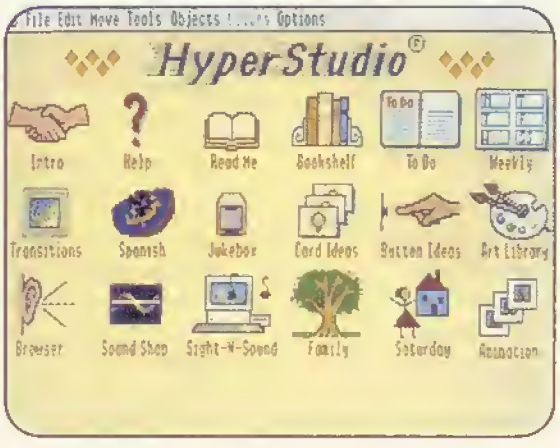
Does HYPERSTUDIO

By JEFF CABLE • WEST COAST EDITOR

Graphics, text, sound, video—put it all together in an interactive multimedia presentation, even if you've never programmed anything more complicated than your wristwatch. Harnessing the power and integration the GS has always promised, Roger Wagner's HyperStudio heralds the next generation of Apple II computing.



COMPUTER SOFTWARE HAS evolved steadily since the early 1980s, when practical, accessible applications such as VisiCalc emerged. This revolutionary spreadsheet program helped transform the personal computer from a hobbyist curiosity into a serious business tool. But, more importantly, VisiCalc changed our *perception* of computers. We no longer needed to compose BASIC commands to compute numbers. The screen became a worksheet on which we related and manipulated numbers.

Then in the mid-'80s AppleWorks added another twist to Apple II software—integration. Rather than making you learn separate commands and interfaces for a word processor, a spreadsheet, and a database manager, AppleWorks provided a consistent environment—the now-famous file-card interface—and the ability to move data easily among all three programs.

Not long after, the mouse-based graphical (iconic) interface came into being, originally on the Macintosh and subsequently with the release of the IIGS. *Point*, *drag*, *pull down*, and *click* were the new buzzwords around Apple.

Now in the late '80s comes the next generation of computer software: an interactive multimedia environment, commonly called *hypermedia*—the ultimate integration of everything you can do with your computer. Comparing hypermedia to traditional software is like comparing snapshots to motion pictures. Hypermedia on your desktop lets you and your Apple act as a conductor, directing the actions of text, graphics, sound, and even video.

The most successful, or at least the most widely known, implementation of hypermedia is HyperCard for the Macintosh. The buzzwords you hear associated with HyperCard on the Mac—*stacks*, *cards*, *buttons*—are same ones you'll hear when discussing Apple II hypermedia products, such as Roger Wagner Publishing's **HyperStudio** for the GS (see Editors' Choice, August 1989, p. 108) and Techware's **Tutor-Tech** for 8-bit Apples.

To understand hypermedia you'll have to throw out the traditional concept of computing. The basic premise behind hypermedia is that anyone can create audiovisual "databases"—infinitely varied, infinitely detailed presentations—on any subject.

For example, let's say your first screen—that is, your first *card*—shows a drawing, a digitization, or a video of the world. Every country may represent a different direction the presentation can take. Selecting the United States, for example, reveals a more detailed map. Choose one of the 50 states, and you get a map of that state. This sequence could continue until you're in a screen that shows your living room.

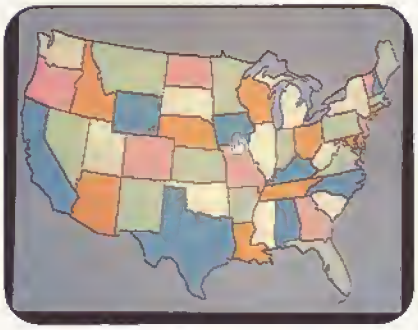
You've progressed from the world, to the United States, to Iowa, to Des Moines, to Maple Street, to your house, to your living room. The impressive thing is that you could have selected Chile instead of the United States and gone in a different direction. Or you could have dialed your (actual) phone by selecting its icon from the living-room card. You'll be amazed to discover that creating such a presentation isn't difficult.

While Techware's Tutor-Tech has been available for the Apple IIe, IIc, and IIc Plus for a couple of years (see the accompanying sidebar),

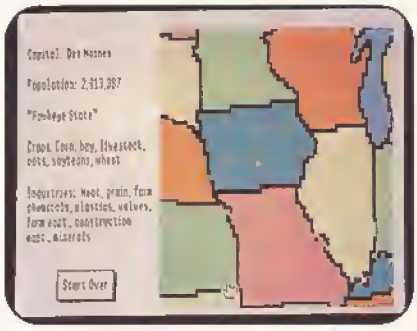
Photography • Larry Dunn

STACK UP?

Title screen from HyperStudio geography stack (application).



Next card shows 48 options; use the mouse to move the cursor and click on Iowa.



Zeroing in on Iowa gives you a summary of the state's vital statistics, plus the option to return to the U.S. map for another selection.

it's the sound, graphics, and operating-system capabilities of the GS that make hypermedia attractive for Apple II users. For that reason, Roger Wagner's HyperStudio is one of the most exciting Apple IIGS products to be announced. In fact, the GS' inherent sound and graphics combined with third-party software and hardware make it better suited for hypermedia than the Mac Plus or Mac SE.

Because HyperStudio is so different from any other Apple II product, it's hard to imagine what you can do with it. HyperStudio isn't a programming language, nor is it a painting program (although one is included). It's an "interactive authoring system" that lets you incorporate text, graphics, sound, music, video, and digitizations into your applications or, as HyperStudio calls them, *stacks*. Its software not only provides basic integrated applications you can use to create presentations, but through a series of step-by-step menus lets you bring together data you've generated in other programs that are not normally compatible with each other—a drawing from your usual paint package and a tune you wrote with your favorite music software, for example.

BUTTONS, CARDS, AND STACKS

When you launch HyperStudio, you'll see the "Home Card" first—the program's main menu. On the Home Card you'll see a number of colorful icons representing different stacks that were written with HyperStudio. (If you're booting into HyperStudio from the Finder, you can go directly to one of the stacks.) From the Home Card, you can click on any icon to load and run that particular stack. For example, you'll notice an icon that looks like a building. When you click on it, a picture of a house appears. You're now using that stack. HyperStudio stacks let you put together words, pictures, and sounds to explain and illustrate an idea easily and effectively.

A stack contains two or more cards; a card can contain text, sound, graphics, or any combination. On each card you'll position one or more *buttons*, icons (often rectangles or arrows) that let you move from card to card. You can move among cards in the same stack, or from a card in one stack to a card in a different stack. If you want the user of your stack to have several options or directions in which to go, you may want several buttons on the card. For example, one button could be a forward-pointing arrow letting you continue to the next card; a backward-pointing arrow would provide the option to go back to the previous card. A common button is an icon of a house, which returns your user to the Home Card.

THE FLOW OF IDEAS

It's important to remember that you don't have to move in a linear direction; that is, the user, not the software, determines what events will occur (within the choices or limits the application's designer has "programmed" into it). For instance, in the example above you could have moved on to a lesson on the history of Iowa, rather than to your home in Des Moines.

Linking cards is simply a way to connect ideas. For example, let's say you're a parent or teacher trying to explain the parts of a typical home ►

to a young child. Using any super-hi-res GS painting program, or the painting tools within HyperStudio, you can draw a typical home. This would be the first card in your stack. You'll want to put some buttons on your stack so that the child can point and click on some part of the house and see what's inside. If you create a button on the bedroom window, for example, when the child clicks on that window the house will disappear and a card showing the bedroom will appear. Or maybe he or she will want to see what the inside of the garage looks like. You can make the garage door a button. Using animation, you could open the garage door, revealing the next card—the interior of the garage.

Now that you're inside the garage you can program a whole new range of possibilities. For example, you can show a car, a bicycle, and some tools with corresponding buttons that will let your user examine each one in more detail. For instance, if he or she clicks on the car, you can provide the opportunity to look more closely at each part of it. It's just a matter of linking cards, buttons, and stacks in the order you want.

MAKING IT HAPPEN

You're probably wondering how difficult it is to make all this happen. It's simple—really. For example, you can create a button by pulling down *Objects* on the menu bar and selecting *Add a Button*. HyperStudio prompts you to select the shape of the button; you can choose among square, shadowed, round, or invisible styles. If you want a word to appear inside the button, just enter the appropriate text and hit Return.

HyperStudio then lets you position the button anywhere on the card. When you've determined the correct location for the button, a dialog box will appear and ask you what action should take place when the button is selected. You can have that button send the user to another card, for instance, or play a sound, or run an animation sequence you've created with Paintworks Gold or Paintworks Plus. You can even have HyperStudio keep track of correct inputs if you use the buttons for multiple-choice questions.

You can also determine the way one card links to the next. You can make it fade from black to white or scroll from left to right; you can watch blocks on screen disappear randomly, or create any number of other fancy effects. With a couple of simple commands, it's easy to make your cards look and sound like a professionally produced video presentation.

Not only does HyperStudio let you link one card to another, but you can also link one stack to another; you can even link your HyperStudio stack to another application. This means that you could write your own Finder or program launcher by creating a Home Card with icons for each of your favorite applications; clicking on an icon could direct HyperStudio to launch that particular program. You can preset HyperCard to return to the Home Card after exiting that program, to the Finder, or to the end of the stack from which you originally chose that program.

Top right, title screen reveals contents of next two levels of information.

Middle right, each card presents two suboptions.

Above and right, third level offers you a choice of several information cards.

HyperStudio's linked, multimedia databases mean that the user, not the software, determines the flow of events (within the limits the application's designer has "programmed" in).

DRESSING UP

Each screen you see in HyperStudio will probably display some high-resolution graphics. If you're not an artist, don't worry. You can use clip art from any of your favorite GS painting programs or you can choose from more than 250 clip-art images included with HyperStudio. Along with the art disk, you'll find another disk containing sound effects—animal noises to breaking glass—you can incorporate into your stacks. If you want to create your own sound effects, HyperStudio comes with Roger Wagner's program Sound Studio, a no-slot sound-digitizing card, a microphone, and a small amplified speaker. (The speaker isn't great, but it's better than your GS'.) Considering all the added features, the $129.95 price represents an exceptional value.

Don't forget that if you own or have access to a Pioneer 4200 LaserDisc player or compatible and the new Apple II Video Overlay Card (see

CARD TRICKS

"Roll Video," May 1989, p. 42, and "Reel-World Images," July 1989, p. 40, for details), you can produce interactive video with HyperStudio. Now if someone clicks on the picture of the car in your garage, your RGB (red-green-blue) monitor becomes a full video screen on which you can show movies of cars speeding down highways or of an automobile-manufacturing plant. With all these hardware and software options, the education, business, and home possibilities are endless.

Remember, too, that although it's easy and fun to produce your own HyperStudio stacks, you don't have to create them from scratch to enjoy this product—you can borrow stacks from other Apple II users. Log on to your favorite bulletin-board system (BBS) or AppleLink Personal Edition, or visit your local Apple user group and you're sure to find ►

Curing the 8-Bit Blues

If you own an Apple IIe or IIc and are suffering from a case of hyperlust, don't despair. Techware, of Altamonte Springs, Florida, offers an interactive cure that lets you use your 8-bit Apple to create and use HyperCard-like stacks.

Techware's *Tutor-Tech* ($195) is designed to let educators create multimedia lessons; appropriately, the software runs on a minimum of 128K of random-access memory (RAM) and one disk drive. While Apple and other vendors like to talk about AppleTalk networks running GSes and Macs, the 128K one-drive Apple II setup is still a common configuration in many schools. Tutor-Tech is hypermedia for the masses.

Tutor-Tech mimics the Macintosh HyperCard interface and uses the terms every user of hypermedia ought to know—*stacks*, *cards*, *buttons*, and so on. (See the accompanying article for details.) Tutor-Tech's ability to interact with the Pioneer 4200 laser-disc player and the Apple II Video Overlay Card lets you create high-quality interactive lessons that combine computer graphics and animation with video. Techware has also announced an incentive program that allows owners of the Apple II Video Overlay Card to take $50 off the price of Tutor-Tech software. The company says its products will soon support CD-ROM and will offer the ability to read HyperCard stacks created on the Macintosh.

In addition to compatibility with new products like the Overlay Card, Tutor-Tech works with digitizers such as ThunderScan and ComputerEyes. And if you don't own a mouse, you can control Tutor-Tech with a joystick as well as a variety of input devices such as the KoalaPad and Muppet Keyboard.

Tutor-Tech features a drawing program, but if design-your-own isn't one of your strengths, you can import clip art from MousePaint, The Print Shop, The Newsroom, Dazzle Draw, and other programs. (You must convert Newsroom and Print Shop graphics to ProDOS before you use them with Tutor-Tech, though.)

If you're one of the millions of Apple IIe and IIc owners, Tutor-Tech offers an exciting chance to experience the wonders of interactive technology. Keep in mind, however, that 8-bit Apples aren't as well suited for hypermedia as the GS; Tutor-Tech offers an attractive option, but the GS' outstanding sound and graphics capabilities as well as exciting third-party software and hardware products lend themselves better to interactive multimedia.

Techware has done a commendable job of bringing a HyperCard-like environment to the 128K world of Apple IIs in education. If you use an Apple IIe or IIc in the classroom and want to expose your students to interactive hypermedia, Tutor-Tech's the only game in town.□

interesting public-domain stacks. You'll see hundreds of different applications offering new perspectives on the Apple IIGS.

HYPERSCHOOL

HyperStudio is a natural for education; Roger Wagner Publishing recognizes that and offers site-license plans to make the product affordable for educators. Schools have the option of outfitting each of their Apple IIGSes with the HyperStudio software and all accompanying hardware for $65 per system. If you don't need the speaker, microphones, and digitizing card, you can purchase the software for $35 per computer. Apple's dominant share of the school market, coupled with the advent of the multimedia classroom and an aggressive pricing strategy, will make HyperStudio a hit in schools across the country.

HyperStudio's software requires an Apple IIGS equipped with 768K of random-access memory (RAM), although the program runs more efficiently with 1.25 megabytes. Other than the standard GS equipment, such as a color monitor and a 3½-inch disk drive, you don't need additional hardware or software. Some third-party products, however, complement HyperStudio particularly well. If you have Mediagenic's Paintworks Gold or Paintworks Plus, for instance, you can create animation and then import it directly into one of your stacks (as described above). And DeluxePaint II, from Electronic Arts, offers great graphics-editing features that will help you create fancy super-hi-res illustrations you can add to your HyperStudio cards.

Although a sound-digitizing card is shipped with HyperStudio, third-party digitizers, such as Applied Engineering's Sonic Blaster or Sound Ace from Parallax, offer superior sound samplings and more effects for your recordings. And a video digitizer, such as ComputerEyes from Digital Vision, will capture images from your videocassette recorder (VCR), laser-disc player, or video camera, adding even more graphics possibilities to HyperStudio. With all these products and HyperStudio you could create a multimedia family tree, for instance—digitized pictures of each member as well as a brief personal speech, both text and sound.

For home activities, schoolwork, and business presentations, whether it's a family tree, a house tour, or a lesson in European geography, HyperStudio offers you the programming flexibility to stretch your imagination and expand your creative horizons—plus countless new ways to use the full power of your Apple IIGS.□

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